



**EXPERIMENTAL SCHOOL OF UNIVERSITY OF  
MACEDONIA**

## **Seismic and Volcanic activity in Southern Europe**

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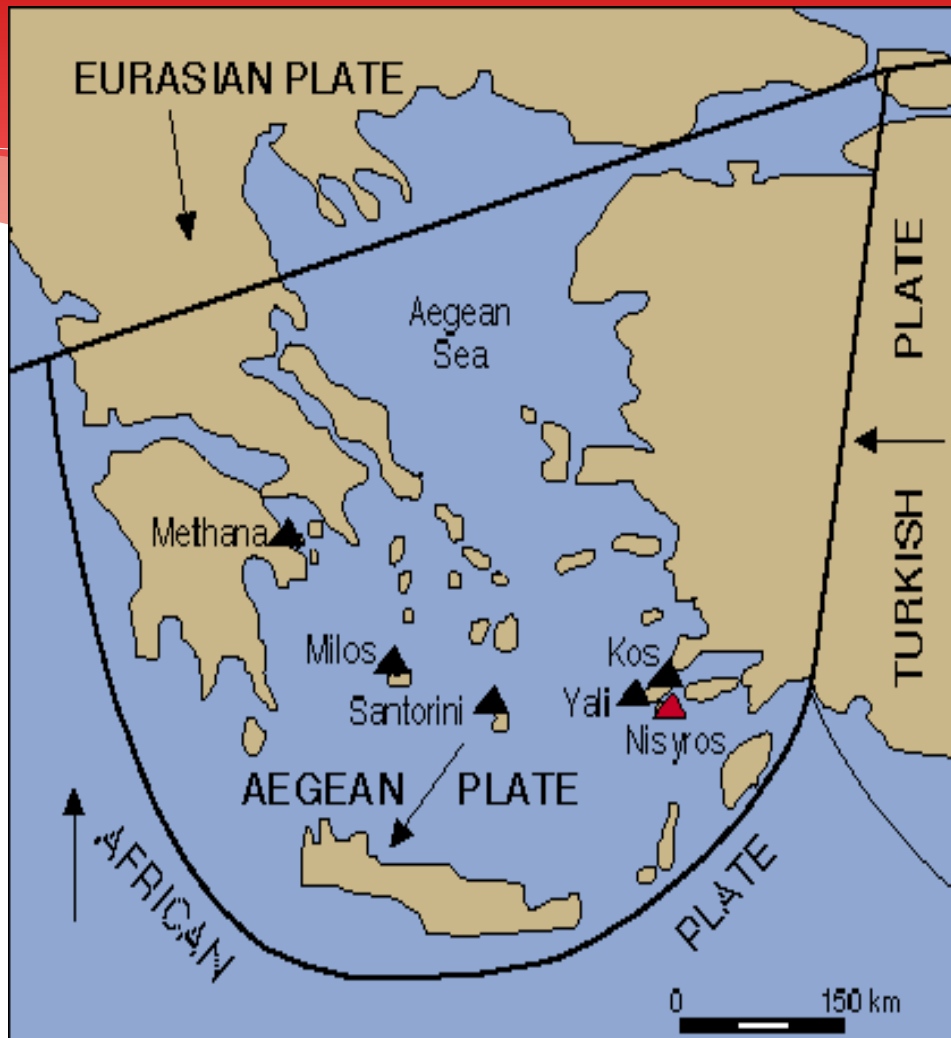
# Few words about the seismic and the volcanic activity.

Seismic and volcanic activity has been created in a similar way. It happens in some areas called tectonically active zones . It is created from collision or removal of tectonic plates. Its activity may lead in casualties among humans (deaths / injuries).

## Iceland's major volcanoes and tectonic plate boundaries



However, they can also cause economic problems to the country, that they happen. Some examples of countries with a very intense seismic and volcanic activity are Iceland, Italy and Greece.



Volcanoes of the Hellenic arc. Arrows show direction of plate movement. Modified from Nichols (1971).

# Some important volcanic activities

A big volcano eruption happened at 1625 - 1600 BC in Santorini (a Greek island). The eruption was so big that scientists said that the magnitude of the volcanic eruption reached 7 degrees of Richter scale. It is also believed that this was the second biggest eruption in human history.



As a result of this eruption, a big part of the island was demolished. Furthermore, the eruption created a great caldera, which destroyed all the human activity in the island. Since then, the form of the island has not changed.

# Santorini, before and after eruption



( before eruption)



( after eruption)

Another big eruption happened in Pompeii, (western coast of Italy,) where volcano Vesuvius erupted in 79 A.D. This eruption covered with dust the whole Pompeii, as well as the Heraklion and Stavies.



(some people that covered by dust )





Vesuvius

# Some important seismic activities

A big earthquake happened in Thessaloniki at 1978. It registered 6,6 on the moment magnitude scale. From this earthquake 49 people died , 220 people were injured and it is said that over 800.000 people left homeless.





Another 5,8 magnitude earthquake happened in **Modena** (Italy) at 5 /5/12. As a result, 17 people died and many people lost their properties . In addition, many buildings were destroyed as we can see in the following pictures .



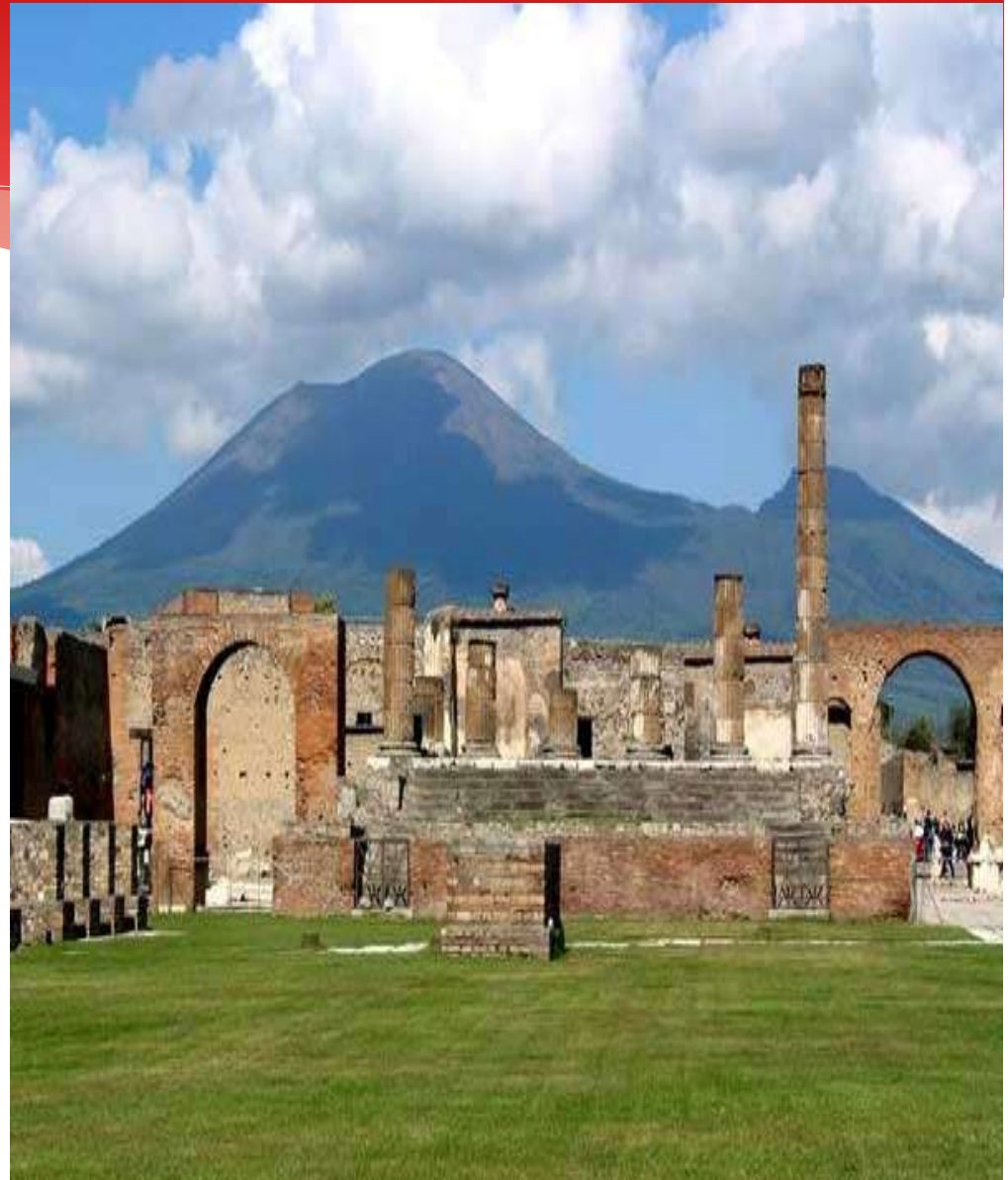
# A positive aspect



Nevertheless, there is also a positive aspect of the phenomenon. Tourism, geothermal energy, raising crops and mineral extraction are economic activities, which are being developed in the countries with volcanic activity.



For instance, 2 million people visit Pompeii, every year, whereas the soil around Vesuvius is appropriate for raising crops. Furthermore, Italy takes advantage of geothermal, using it for producing energy for its daily needs.



As far as Greece is concerned, there is mineral wealth in Santorini , Nisiros and Milos (Greek islands), whereas Santorini is one of the most popular tourist resorts, in a world scale.





In addition, thermal tourism is widely developed in the 60 of the 80 official recognized thermal sources of Greece. Such as are located in Santorini, Aridaia , Apollonia (Thessaloniki) and Aidipsos.



An aerial photograph of a vast, dark, and heavily cracked volcanic landscape. The terrain is rugged and textured, with numerous deep, winding fissures. A road or path is visible, winding through the lower right portion of the image. In the upper left, a body of water is visible, possibly a reservoir or a lake. The overall scene is desolate and dramatic, showcasing the aftermath of a volcanic eruption.

Thank you for your  
attention!